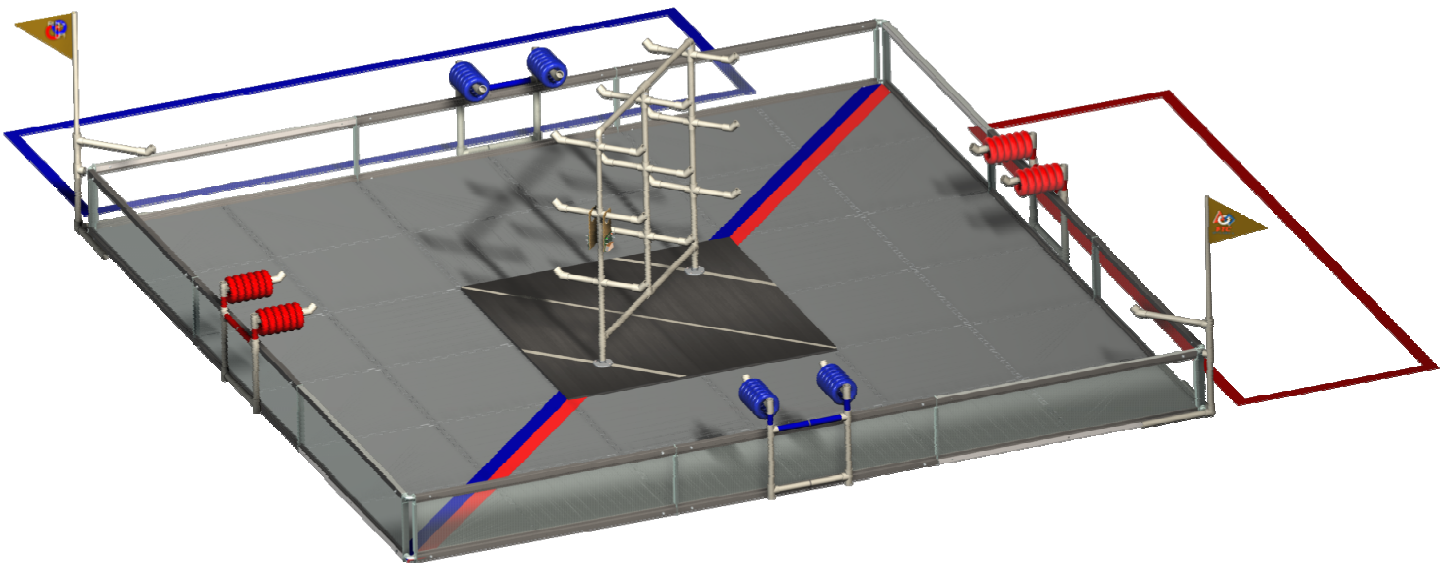




Field Setup Guide

Ring it Up!



Read through all the instructions before you begin to build!

This document is meant to be used as a guide to setting up the game field for competition. It is assumed that the elements have already been built to the specifications given in the Build Guide. You should also have a printed copy of the Scoring System Users Guide and the Field Electronics Setup Guide handy to refer to during field setup.

Revision History

Revision	Date	Description
1	9/08/2012	Public Release
2	9/10/2012	Added pages 12 & 13 of field element dimensions
3	9/21/2012	Made adjustments to measurements on page 12 & 13 to account for construction, with +/- 1" tolerance. Clarified measurement points (top OD of peg, etc)

Field Setup Requirements

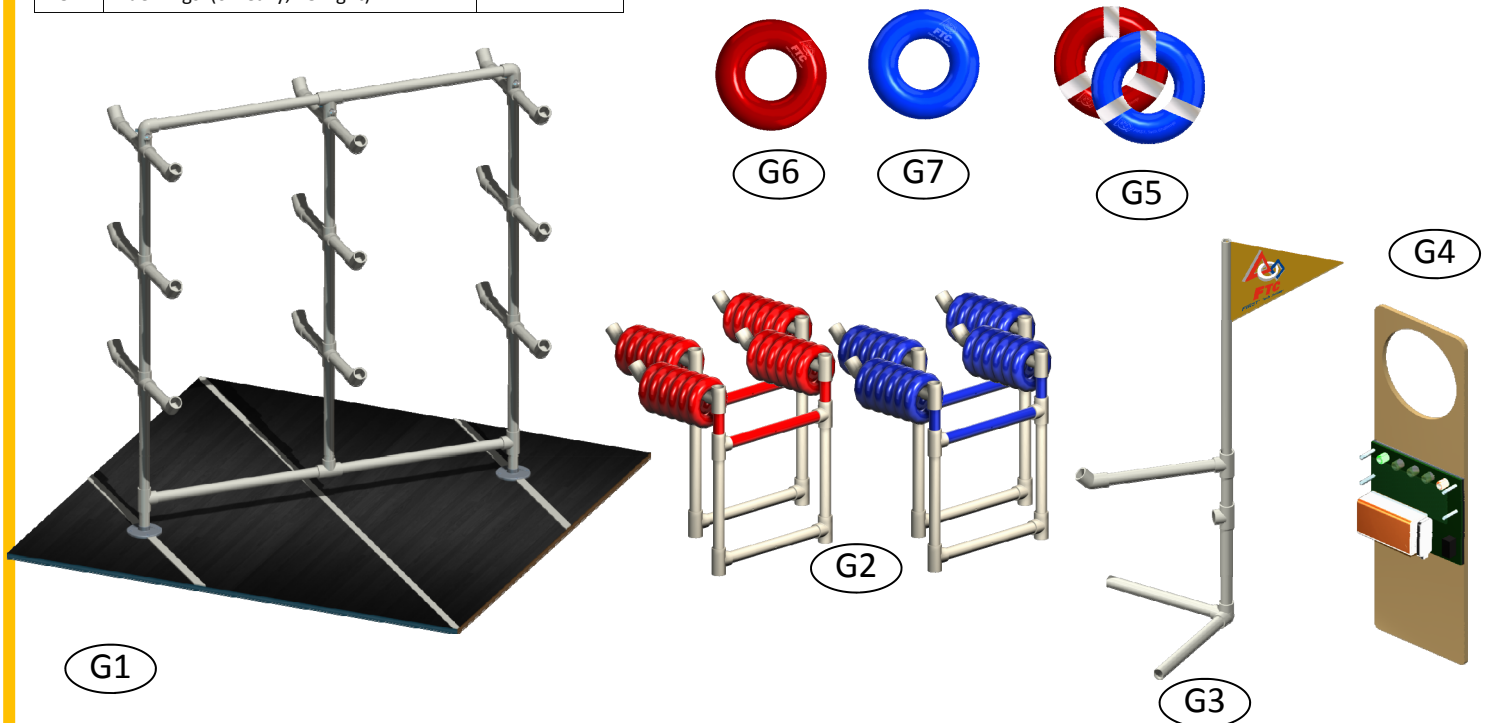
Item	Description	QTY / Field	Where Used
F1	FTC Field Perimeter *	1	Playing field
F2	5/8" Gray Soft Tiles	36	Playing field floor surface
T2	2" Red Gaffer's Tape	As Needed	Driver stations (Outside field) & On Playing field
T3	2" Electric Blue Gaffer's Tape	As Needed	
M7	No Skid Rug Pad 2' x 4'	2	Under Center Rack
M8	8" Cable Ties	As Needed	To secure dispensers and corner goals to the perimeters
M9	9V Batteries **	At least 6	Used in the IR Beacons
M10	Tape Measure		To measure robot lift at the end of the match.

* **A note about the FTC Field Perimeter.** This guide uses the newest field available from AndyMark for illustrative purposes. It may be visually different from the field you may be using. This will not effect game set-up in any way. Notations will be made where necessary to account for perimeter differences.

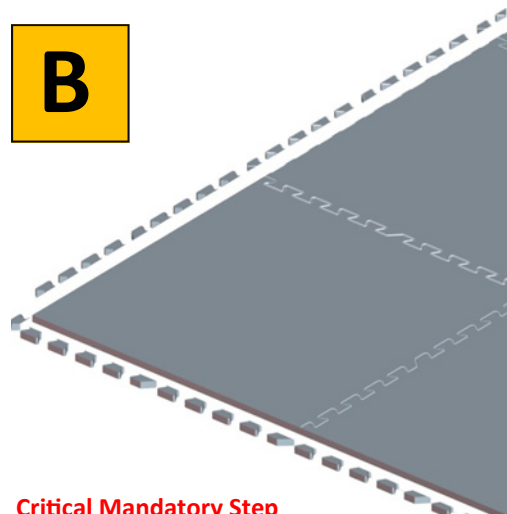
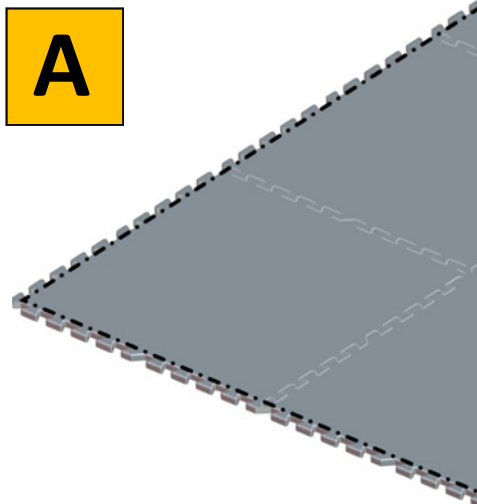
** 9V battery life for the IR Beacons is about 4 hours. Be sure to have enough batteries on hand at your event to ensure the beacons perform consistently throughout the tournament.

Ring It Up! Game Components

Item	Description	QTY / Field
G1	Center Rack	1
G2	Ring Dispensers (2 Red, 2 Blue)	4
G3	Corner Goal	2
G4	IR Beacon Hangers	2
G5	Pre-Load Rings	2 / Alliance
G6	Red Rings (6 Heavy, 18 Light)	24
G7	Blue Rings (6 Heavy, 18 Light)	24



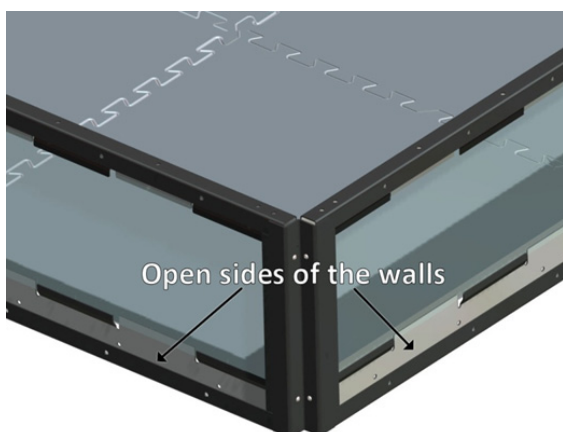
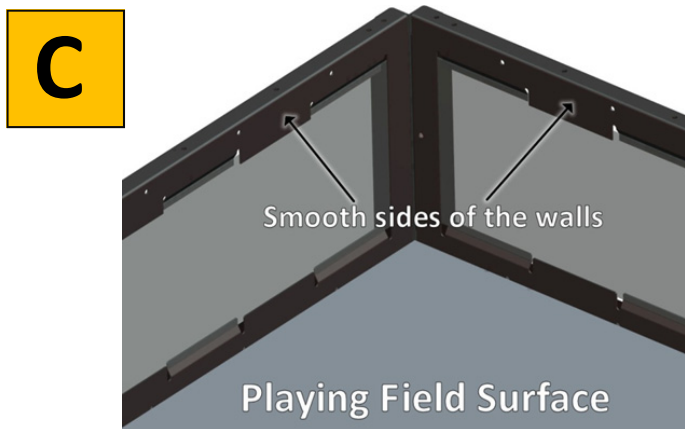
1 Setting up the Floor and Field Perimeter



Critical Mandatory Step

TIP

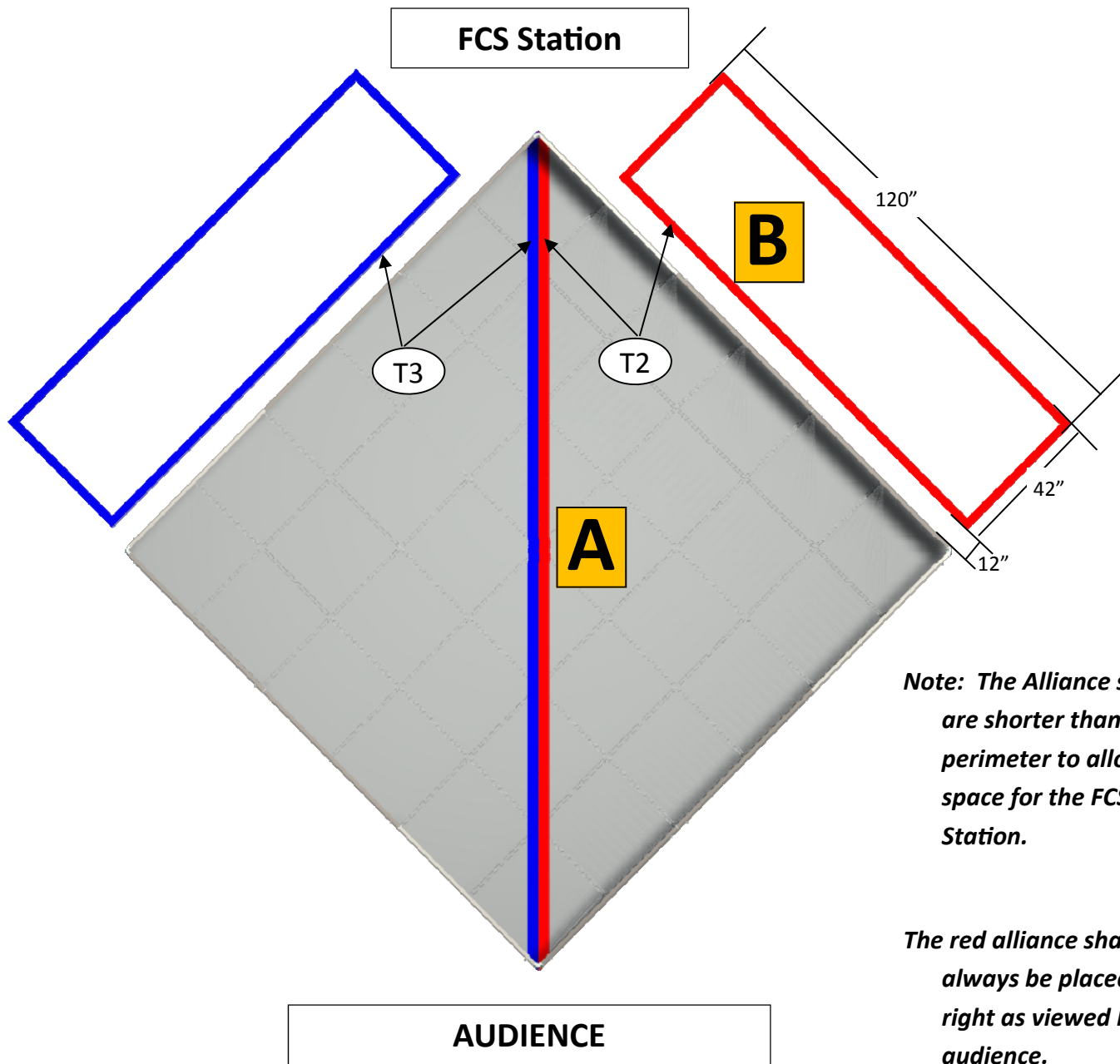
Lay the tiles out and mark the outer edge to be cut. Use a sharp box cutter and a straight-edge, or if available, a band saw to get a smooth, clean edge.



- A. Lay the tiles with the smooth surface facing up.
- B. **Critical Mandatory Step:** Trim all outer tabs from the Soft Tiles.
- C. For older style field perimeters: Set up the perimeter walls with the 'smooth' side toward the inside of the playing field as illustrated. **Note:** The new style Andy Mark field perimeters are the same on both inside and outside surfaces. Follow the setup instructions supplied with your field for details.

2

Tape Placement



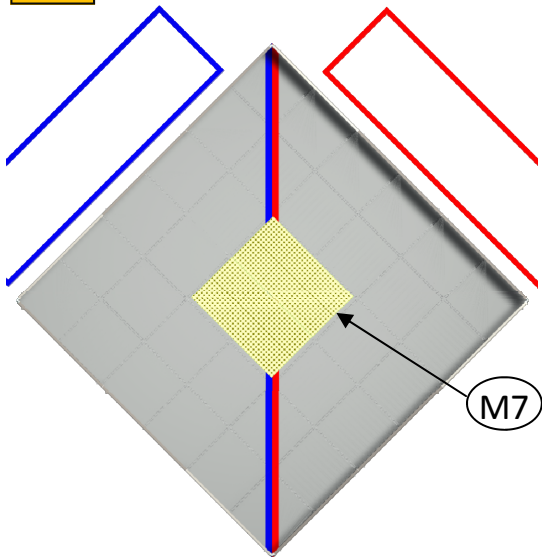
Note: The Alliance stations are shorter than the perimeter to allow for space for the FCS Station.

The red alliance shall always be placed on the right as viewed by the audience.

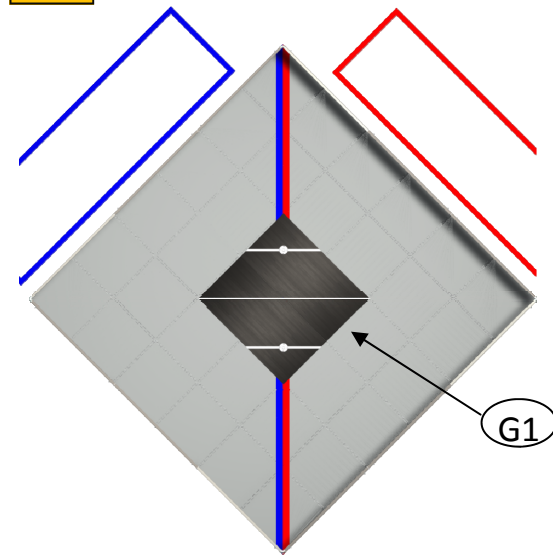
- A. Place 2" red and blue gaffers tape corner to corner as shown.
- B. Use 2" red and blue gaffers tape to mark the Alliance stations on the floor outside the playing field.

3 Setup Center Rack

A Place Non-Skid pad

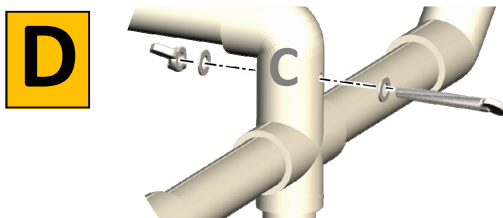
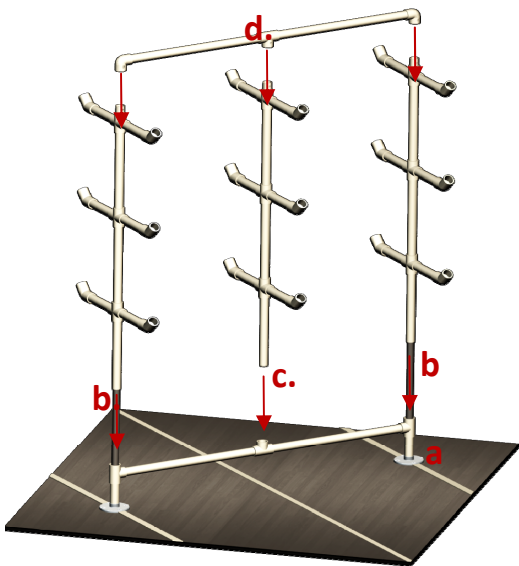


B Place Center Rack Base



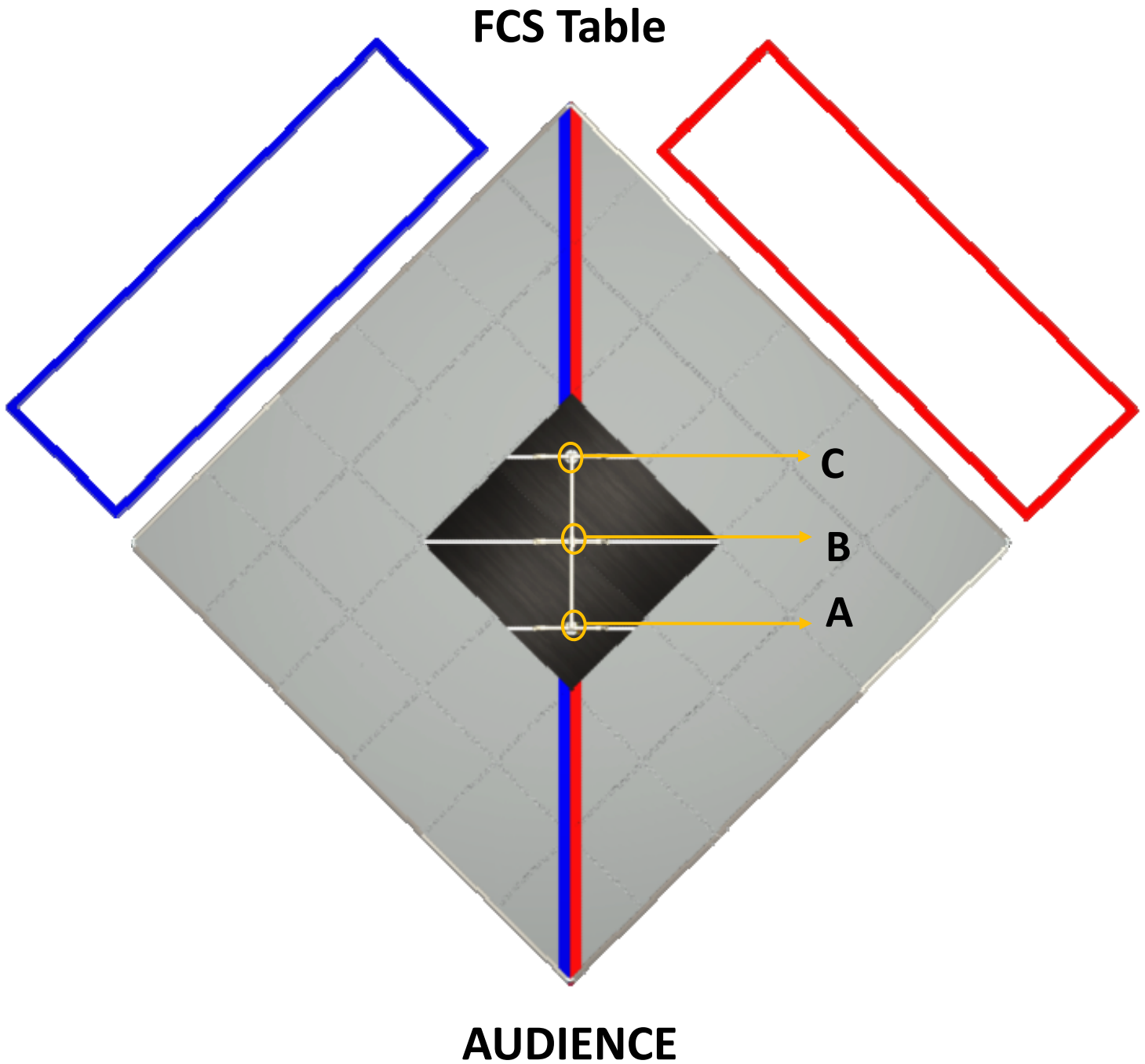
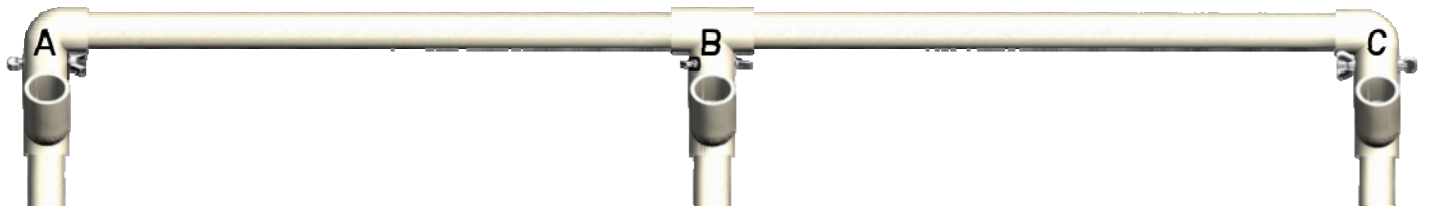
C Assemble Center Rack for Game Play

Note: Be certain the column labeled "A" is positioned toward the audience. See next page for detail.



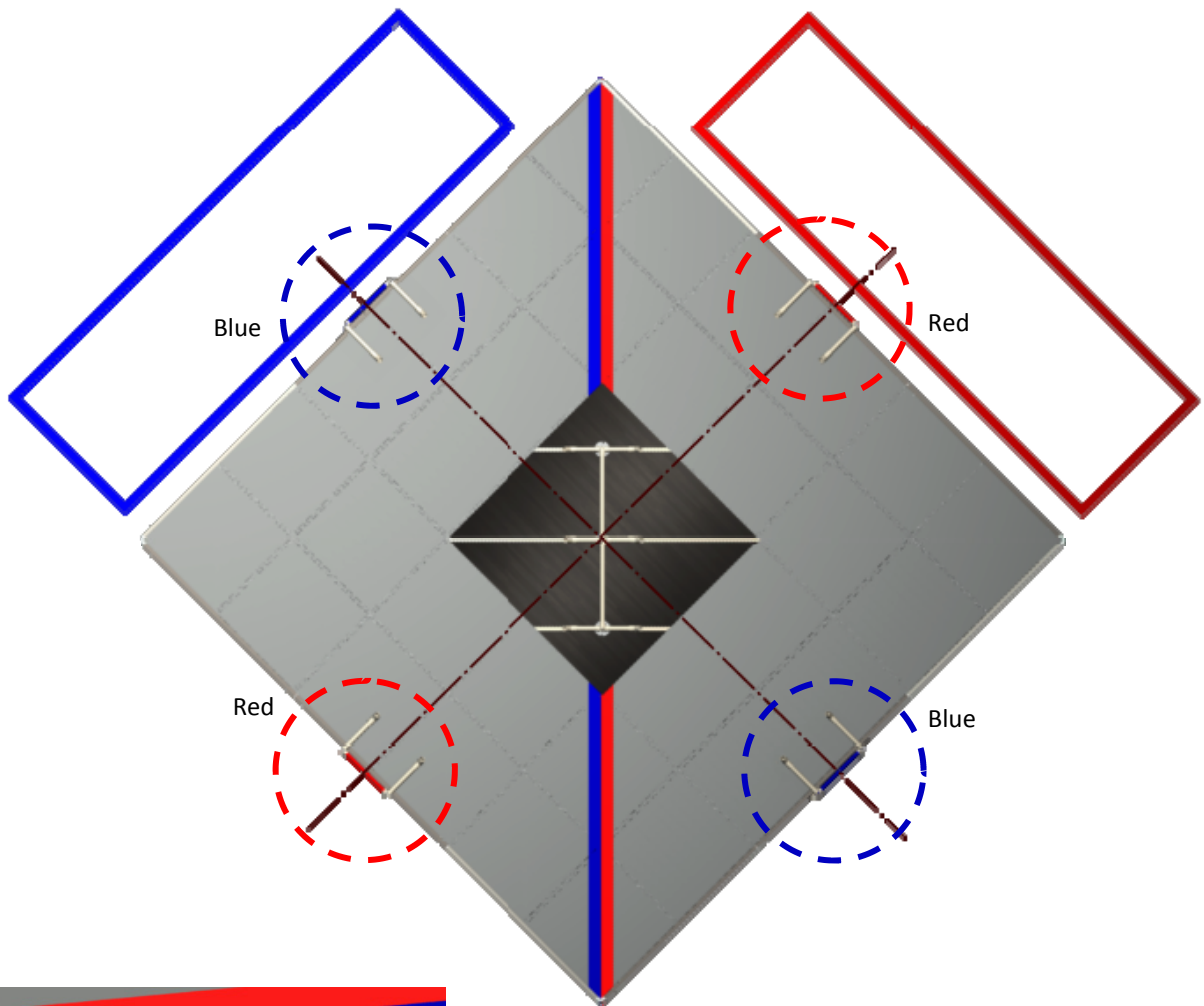
- A. Place two 2' x 4' non-skid pads in the center of the field on top of the Soft Tiles and the gaffer's tape.
- B. Place the wooden base for the center rack on top of the non-skid pads.
- C. Assemble Center Rack
 - a. Using the mounted pipes for support, install the bottom row of the Center Rack assembly.
 - b. Install the two outer Columns first, sliding them over the pipe. Ensure they are positioned with the pegs oriented at a 90° to the bottom row.
 - c. Install the center column into the bottom rack with the pegs positioned as illustrated.
 - d. Install the top rack onto the assembly. **Be sure "A" is oriented toward the Audience.**
- D. Secure the top row with bolts , wing nuts and washers .

3 Setup Center Rack (continued)

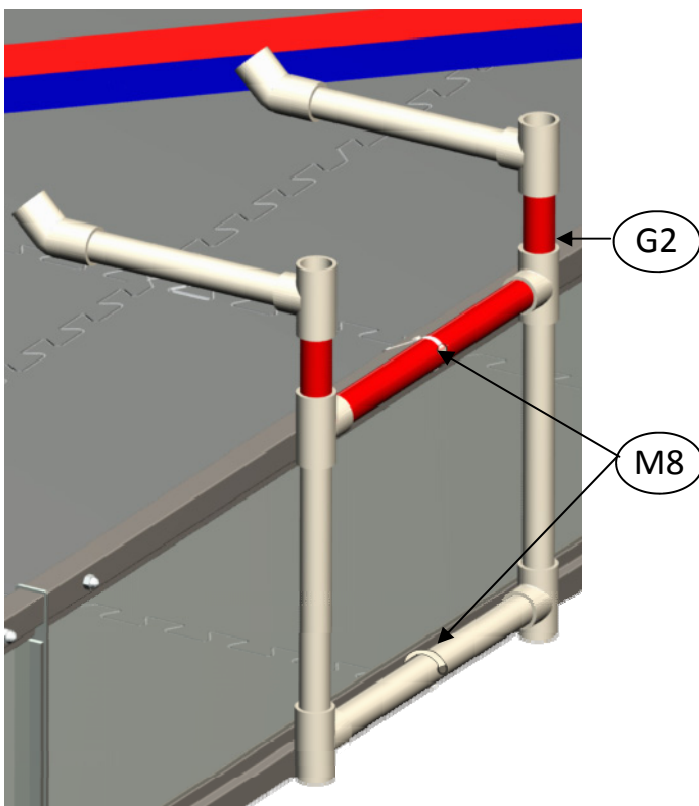


4 Setup Ring Dispensers

A



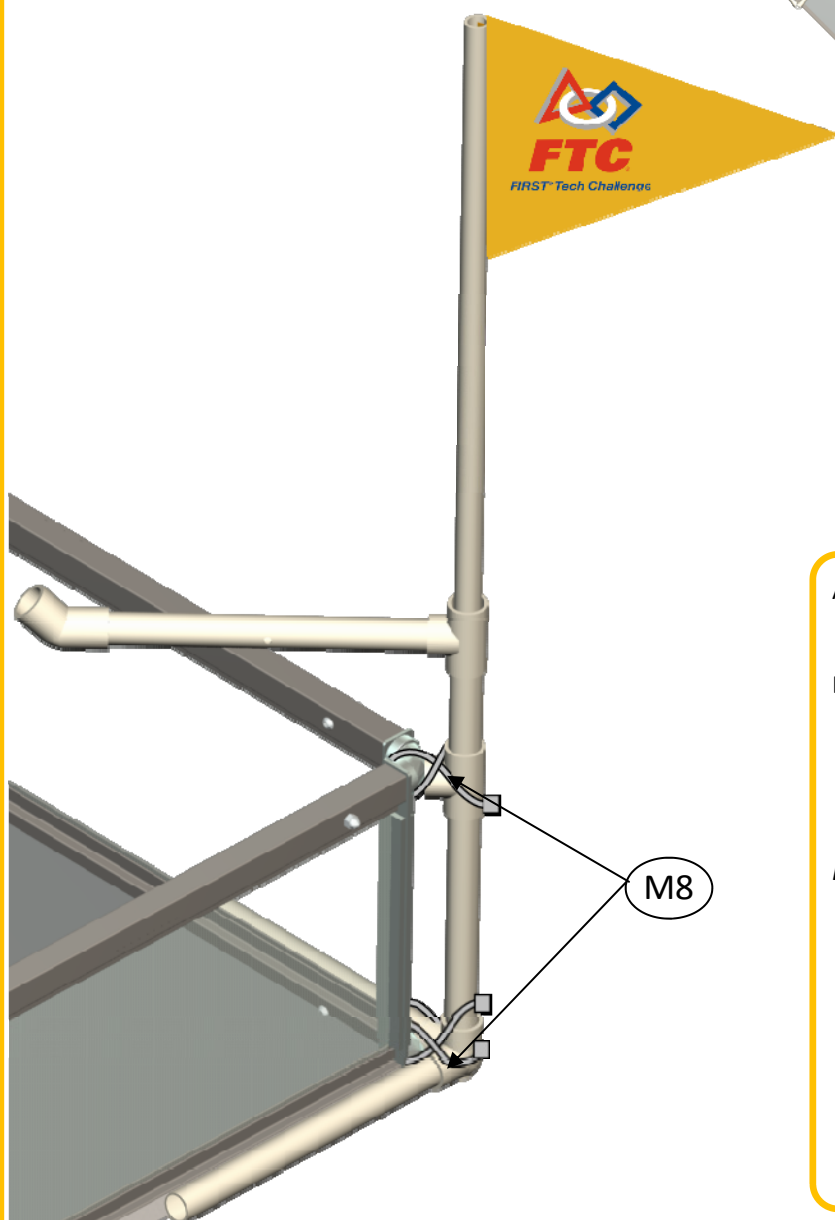
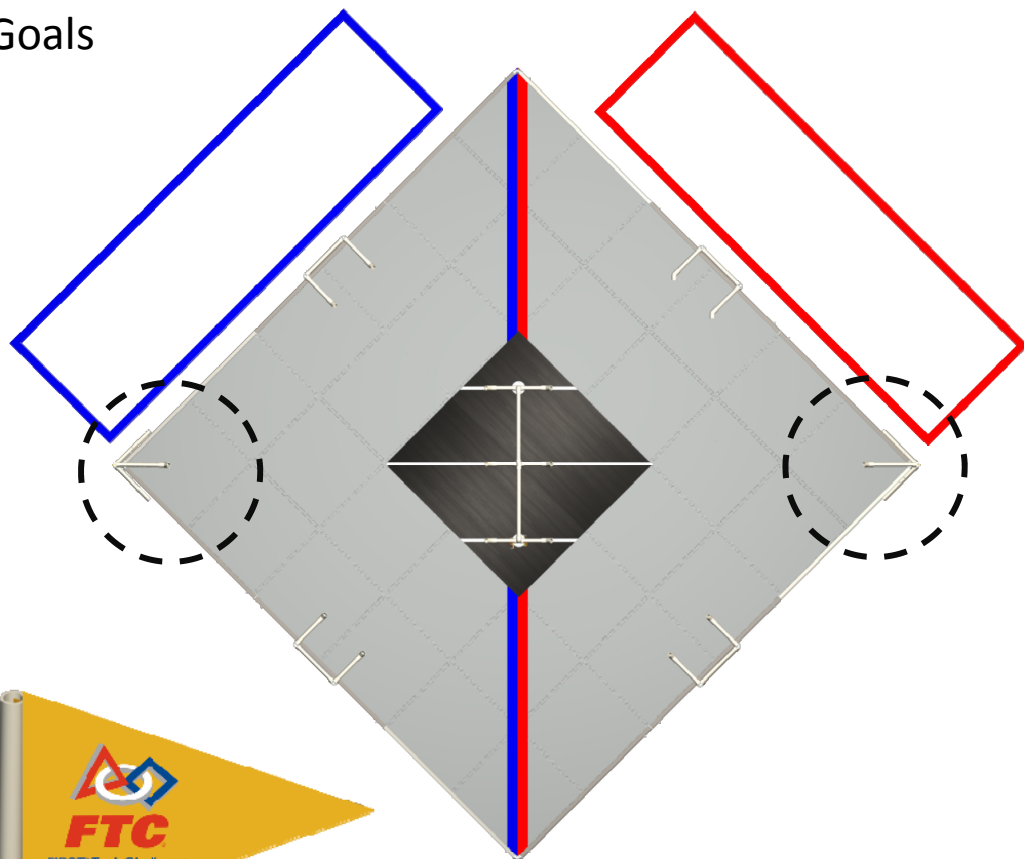
B



- A. Place the ring dispensers at the positions illustrated. Dispensers should be centered along the perimeter walls.
 - B. Secure each dispenser with cable ties, through the access holes on the horizontal pipes, and through the access holes on the perimeter wall.
- Note:** All perimeter fields have some sort of access available for cable ties. Be sure the dispensers are firmly secured.

4

Setup Corner Goals



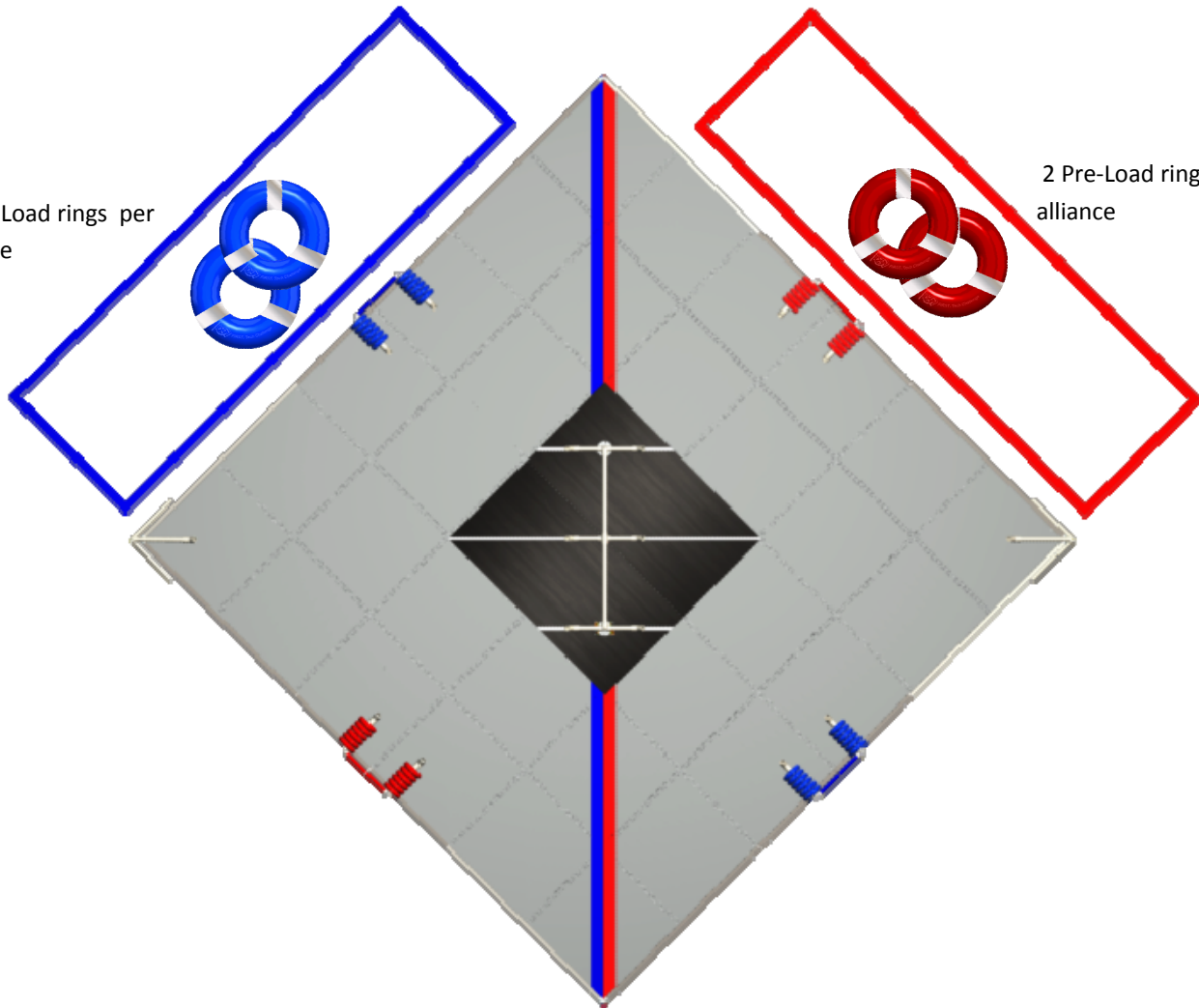
- Place the center goals at each corner in the positions illustrated.
- Secure each corner with cable ties, through the access holes on the horizontal pipes, and through the access hole on the perimeter wall.

Note: All perimeter fields have some sort of access available for cable ties. Be sure the dispensers are firmly secured.

5

Load Rings

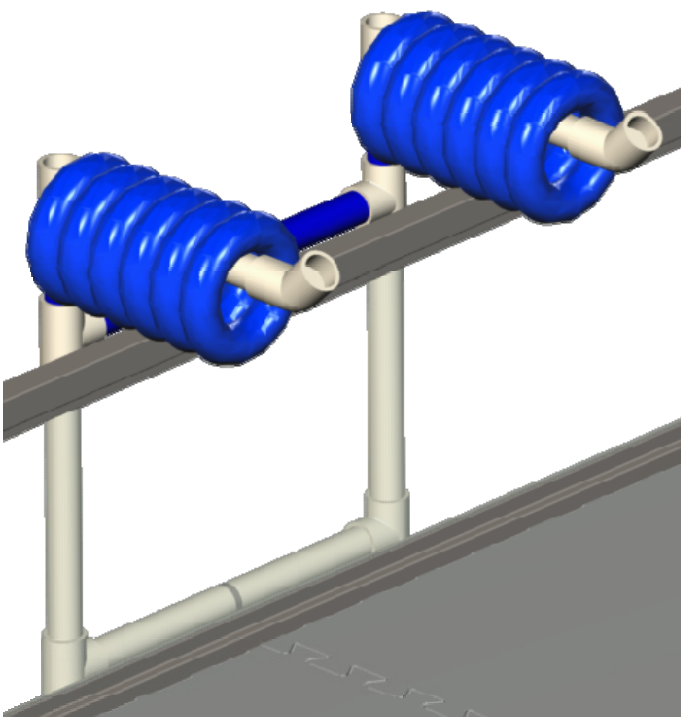
2 Pre-Load rings per alliance



2 Pre-Load rings per alliance

6 Rings Per Arm

Heavy rings are mixed in randomly for each match.

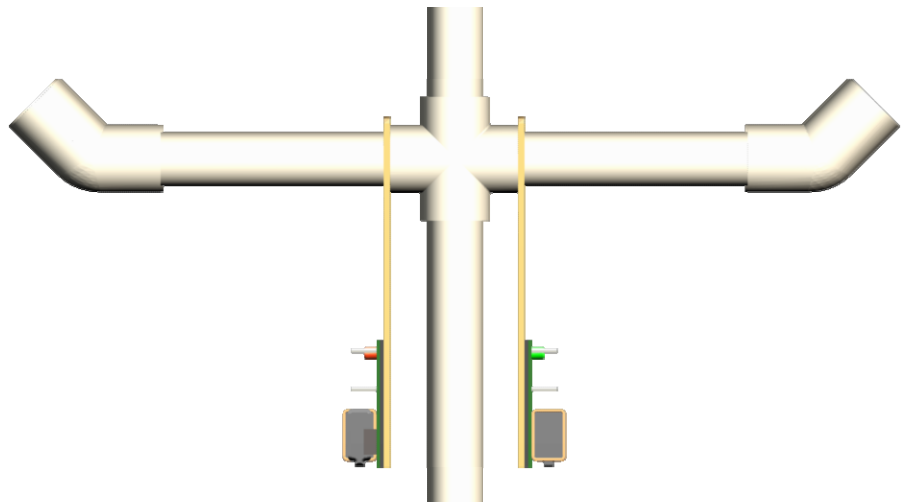
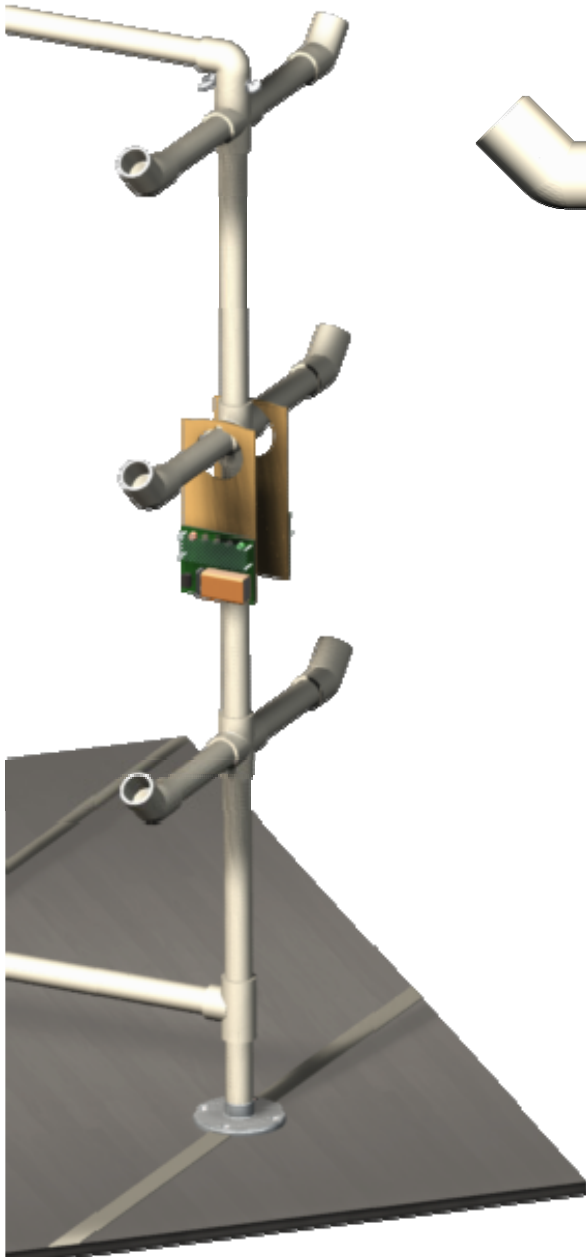


6

Beacon Placement

IMPORTANT: *IR Beacons are placed LAST, after all robots have been placed on the field.* The position of the beacons will change from match to match and is designated by the scoring system.

Beacons will always be placed as a pair, back-to-back on the column designated and always on the middle row of pegs.

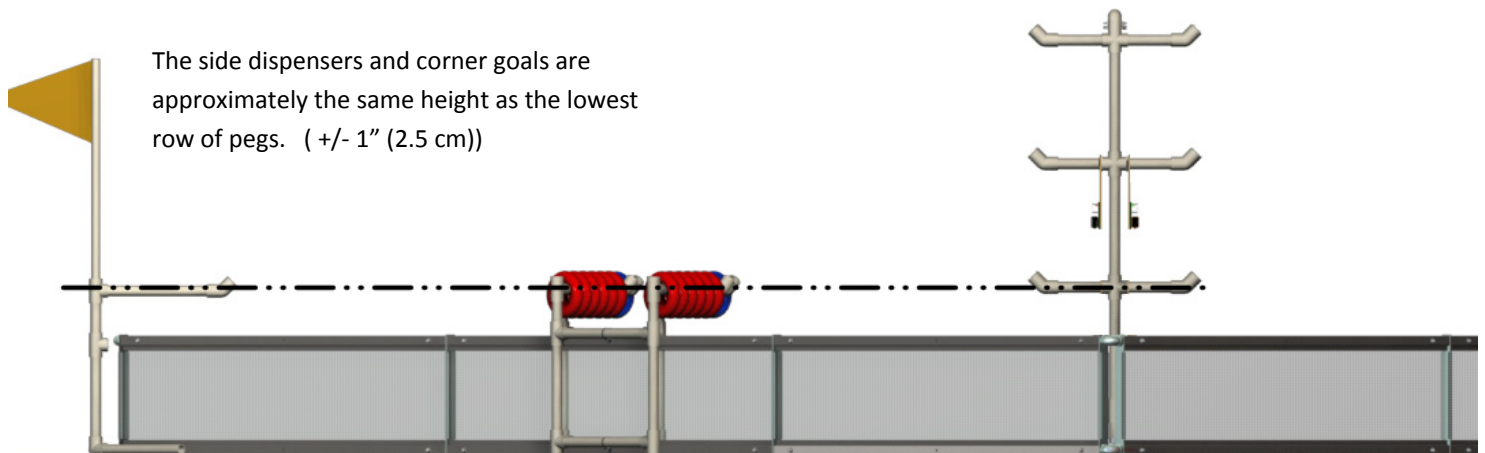
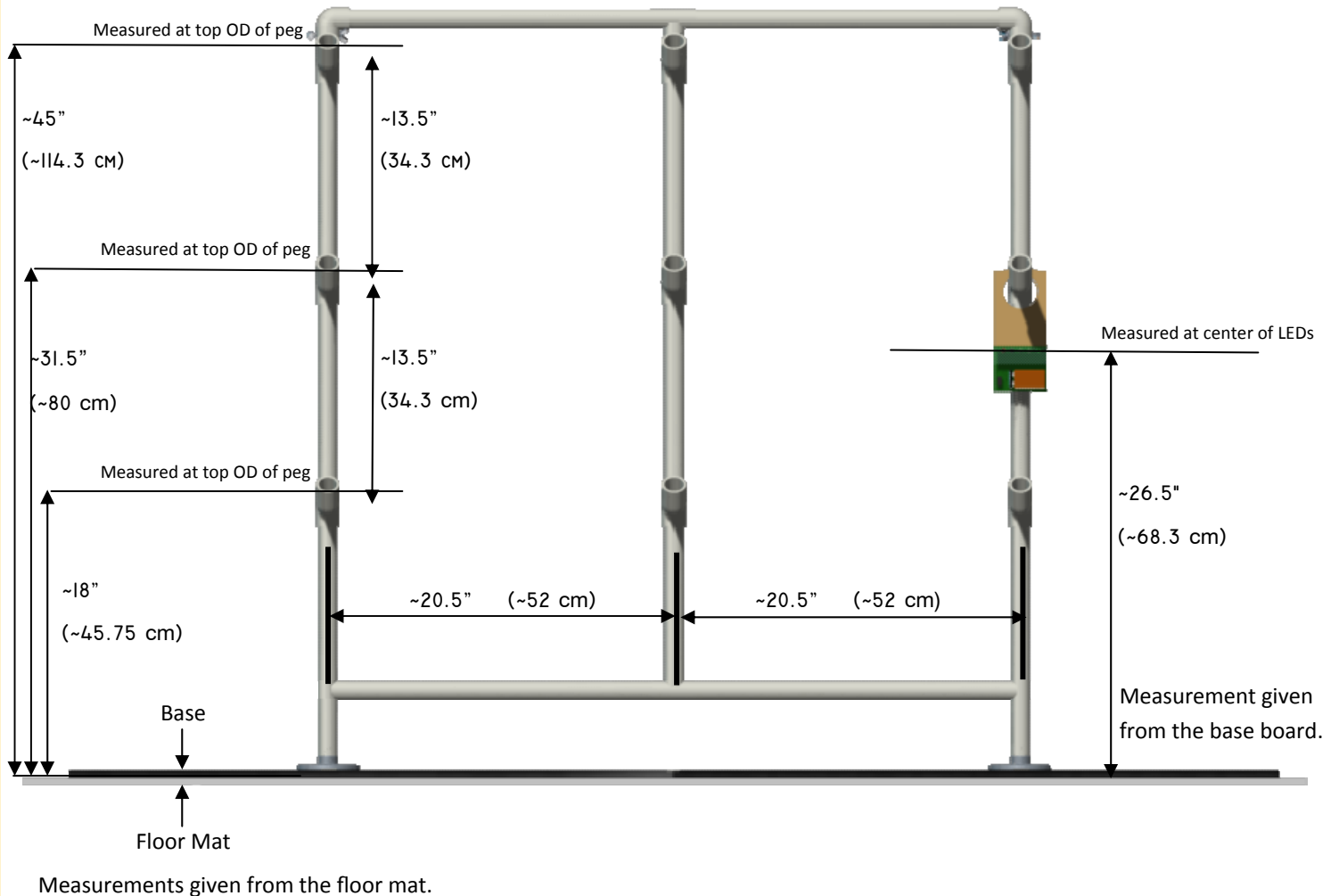


Be sure to place the beacon hanger on the pipe, against (but not on) the cross-fitting as shown.

Note: 9V battery life for the IR Beacons is about 4 hours. Be sure to have enough batteries on hand at your event to ensure the beacons perform consistently throughout the tournament.

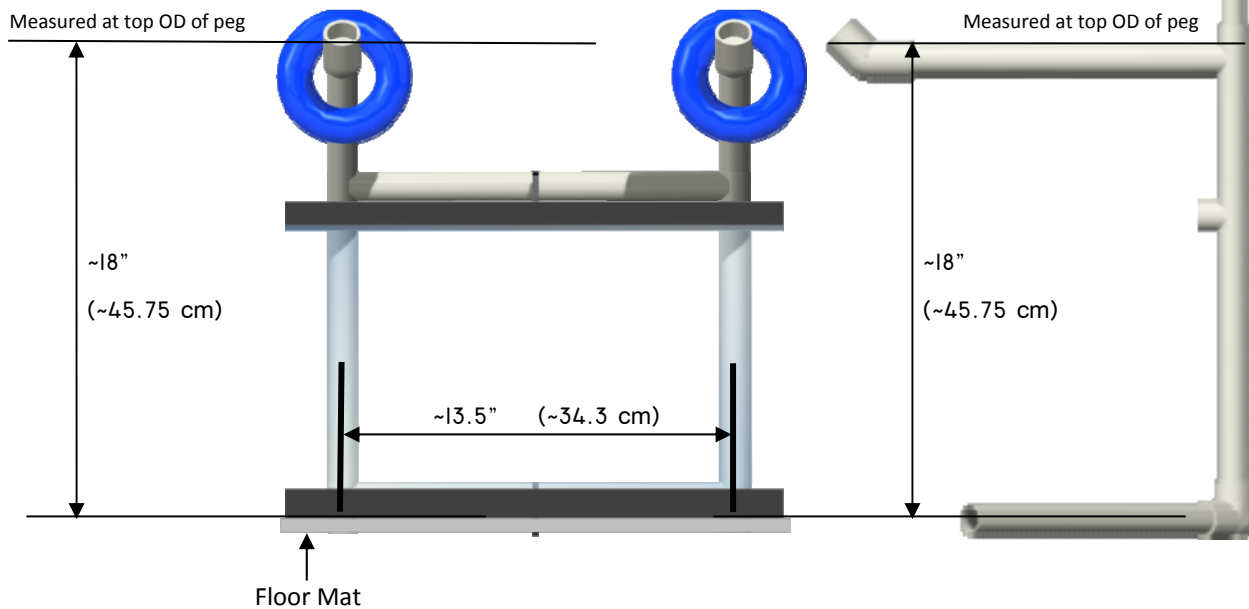
Note: Field construction may vary from venue to venue.

All measurements given are $\pm 1''$ (2.5 cm)



Note: Field construction may vary from venue to venue.

All measurements given are $\pm 1"$ (2.5 cm)



Measurements given from the floor mat.

